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The microcosm.A poem, read before the Me

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## ILLUSTRATIONS.

### I. Andreas Vesalius. Frontispiece.

He was born in Brussels in 1514; hegan his studies in Lonvain and prosecuted them in Italy. He made himself master of Hebrew, Greek and Arabic at the age of 20. When only 28 years old, he published his great work on Anatomy, De Corporis Humani Fabrica. Senac calls it the discovery of a new world; and Haller speaks of it as "an immortal work by which all that had been written before was almost superseded." In it he exposed the errors of the Galenian school, and broke the spell which for so many ages had held the medical world in thraldom. The work met with the fiercest opposition, but the author's reputation steadily increased. In 1544 he was made chief physician to the Emperor Charles V. and afterwards to Philip II. In 1563 or 1564 he suddenly left Madrid to make a pilgrimage to Jerusalem, for reasons not certainly known. The common story is that while he was examining the body of a Spanish nobleman who had died under his charge, as he laid open the chest, the bystanders imagined they saw a tremulous motion of the heart, wherenpon he was denounced to the Inquisition as guilty of murder and impiety. Where superiority of knowledge was esteemed a crime, however innocent, he was sure to be condemned, but through the influence of Philip, his punishment was commuted to a pilgrimage. On his voyage back to accept the Paduan professorship of Anatomy, tendered him by the Venetian senate, he was wrecked on the Island of Zante, where, it is said, he died of starvation, Oct. 15, 1564.

The original painting is the work of a living French artist, F. Hamman, and is on exhibition at Schaus's Gallery in New York city. Its design, as we construe it, is to illustrate the pious spirit in which the great anatomist was accustomed to begin his investigations. With eyes turned reverently upward to a crucifix on the wall, he prefaces the work of dissection with devout prayer to the Divine Redeemer, the Incarnate Word, Maker of all things. Lord of life, Lord also of the Sciences, and "that True Light which lighteth every man that cometh into the world." This view of the design of the

picture makes its accommodation to the purposes of the entire poem obvious and easy. Possibly, by a stretch of courtesy, the invocation found on the 25th page may be allowed to stand for the prayer supposed to be offered.

"Dear God! this Body which with wondrous art," &c.

## II. REMERANDT'S "LESSON IN ANATOMY." PROF. TULP AND HIS PUPILS. ALL PORTRAITS. 1632.—Page 33.

The original of this picture is found at the Hague. It formerly stood in the Anatomy School of Amsterdam, but was purchased by the King of Holland for 32,000 guilders (£2,700.) It is described as a "most wonderful painting and one of the artist's finest works." Sir Joshua Reynolds remarks: "To avoid making it an object disagreeable to look at, the figure is but just cut at the wrist; showing the flexor nouscles of the fingers. There are seven other portraits, colored like nature itself, fresh and highly finished; one of the figures behind has a paper in his hand on which are written the names of the rest, with Remhrandt's own, and the date 1632. The dead body is perfectly well drawn (a little foreshortened) and seems to have been just washed. Nothing can be more truly the color of dead flesh. The legs and feet, which are nearest the eye, are in shadow; the principal light which is on the body is by that means preserved of a compact form."

"The subject Musoles, girded to fulfil The lightning mandates of the sovereign will,— Th' abounding means of motion, wherein lurk Man's infinite capacity for work."

# III. Harvey Demonstrating to Charles I. His Theory of the Circulation of the Blood.—Page 75.

William Harvey was born in Folkstone, Eng., April 1, 1578, died in London, June 6, 1657. In 1628, he published his great discovery, made, it is said, but not matured nine years before, in a work entitled *Exercitatio Anatomica de Motu Cordis et Sangiuinis in Animalibus*, and dedicated it to Charles I. He lived to be considered as the first anatomist and physician of his time, and to see his discovery universally acknowledged.

The original of the above picture is by an English Painter (Robert Hannah).

"Make room, my Heart, that pour'st thyself abroad, Deep, central, awful mystery of God!

Where Auricle and Ventricle with power Repeat their grasp five thousand times an hour."



## THE MICROCOSM.

## A POEM

READ BEFORE THE MEDICAL SOCIETY OF NEW JERSEY AT ITS

CENTENARY ANNIVERSARY: WITH THE ADDRESS

DELIVERED AS PRESIDENT, JAN. 24, 1866,

BY

ABRAHAM COLES, M.D.

"Know Thyself."

NEW YORK:
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1866.

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- "What a piece of work is Man! How noble in resson! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a God!"—SHAKESPEARE.
- "I esteem myself as composing a solemn hymn to the Anthor of our bodily frame, and in this I think there is more true piety than in sacrificing to Him hecatombs of oxen, or burnt offerings of the most costly perfumes, for I first endeavor to know Him myself, and afterwards to show Him to others, to inform them how great is His wisdom, His virtue, His goodness."—GALEN.
  - "I will praise Thee; for I am fearfully and wonderfully made."-DAVID.





## PREFACE.

HE following Address and Poem were delivered before the Mcdical Society of New Jersey at its recent Centennial Meeting, and published with

its Transactions. Prepared amid the hurry and distractions of other duties, and with special reference to the demands and limitations of the occasion, the Poem, as originally delivered, fell short of the author's design, which was to produce, if possible, a tolerably complete compendium of that noblest, more necessary, and yet, strange to say, that most neglected of all the Sciences—Anthropology—relieved of some of the dryness belonging to the ordinary modes of presentation.

The hope of supplying in some measure existing deficiencies, led the author, after the manuscript had passed into the hands of the printer, to avail himself of the short intervals which transpired between the receiving and returning of the proofs, to castigate some parts, and expand others not sufficiently developed, so that besides alterations there have been additions to the amount of two hundred lines and more since that first reading. He regrets that the hurry of the press joined to the hurry arising from other causes, afforded so little opportunity for putting in practice the sound inculcation of Horace, concerning the duty of delay and careful finish: lima labor et mora. With more time at his disposal, he thinks he could have done better justice to the fine capabilities of a subject, which the writers of verse, ransacking heaven and earth for a theme, have hitherto for the most part strangely overlooked. This remarkable omission is the more to be wondered at, because many of our best poets have been physicians; and for some reason or other

"the wise of ancient days adored One power of Physic, Melody and Song."

Dr. Armstrong's well-known Poem in four books, written in blank verse, and first published in 1744, entitled, "The Art of Preserving Health," does, indeed, treat partially and incidentally of physiological matters, and may therefore be regarded as forming in some sort an exception to the general rule of neglect affirmed above. It has for its topics—Air, Diet, Exercise and the Passions—discussed of course, in conformity with

the design of the Poem, according to their sanitary bearings, each forming the subject of a separate book. The work was everywhere read and admired; and remains to this day, according to the poet Campbell, "the most successful attempt in our language to incorporate material science with poetry."

While the critic admits that "the practical maxims of science, which the Muse has stamped with imagery, and attuned to harmony, have so far an advantage over those delivered in prose, that they become more agreeable and permanent acquisitions of the memory," he, in common with others, seems to think, that there inhere in such subjects, nevertheless, difficulties of a most formidable kind, a perversity and stubbornness of nature, which are never overcome except by some rare felicity of fortune or surprising exertion of genius. Hence he says: "the author's Muse might be said to show a professional intrepidity in choosing her subject; and, like the physician, to prolong the simile, she escaped on the whole with little injury. \* \* \* What is explained of the animal economy is obscured by no pedantic jargon, but made distinct and to a certain degree picturesque to the conception." So too in his final summing up of the merits of the Poet, he does not fail to emphasize that special one, due "to the hand which has reared poetical flowers on the dry and difficult ground of philosophy."

But there is another and much older example of this morganatic marriage, as some might call it, between poetry and natural science—one antedating the Christian era and the time of Virgil. Lucretius, born in the year before Christ 95, composed a Latin poem in heroic hexameters, entitled *De Rerum Natura*. It is divided into six books; and is based on the doctrines of Epicurus, who taught that the world was formed from a fortuitous concourse of atoms.

The first two books expound the nature and properties of these ultimate atoms or seeds of things, varying in shape and infinite in number, moving in void space infinite in extent, with great swiftness, some in right lines, others declining therefrom, until united to each other after innumerable tentative contacts, all the objects in the universe are generated—which objects form the subject matter of the remaining four books.

The third book is taken up with a description of the mind (animus) and soul (anima) maintaining that both are corporeal, acting on the body by material impact; that the substance of the mind and soul is not simple, but composed of four subtle elements—heat, vapor, air, and a nameless fourth substance on which sensibility depends, and is, so to speak, the soul of the soul; that the soul cannot be separated from the body without destruction to both, and that death is the end of man,

The fourth book treats of the senses, averring that images\* of exquisite subtlety are constantly emitted (shed, peeled off as it were) from the surface of objects, which flying everywhere and impinging on the organs of sight produce vision; that voice and sound are corporeal images, (as proved by their abrading the throat after long or loud speaking,) which strike the ear and produce hearing. Taste and odors are accounted for; and imagination and thought traced to images which penetrate the body through the senses. Sleep is next spoken of, and the various causes of dreams—the book closing with a discourse on love and matters pertaining thereto.

The fifth book treats of the origin of the world—land, sea, sky, sun, stars, the movements of the heavens, the changes of the seasons and the progress of man, society, institutions and sciences—while the sixth book, being the last, attempts an explanation of the most striking natural appearances, such as lightning, thunder, clouds, rainbow, snow, wind, hail, earthquakes and volcanoes, concluding with

<sup>\*</sup> Democritus first, Epicurus afterwards called these  $\epsilon l \delta \omega \lambda a \kappa a l \tau i \pi o v c$ , i. e. eidola and types; Cicero, images; Quintilian, figures; Catius, spectres; Lucretius, effigies, images, simulacra, species, figures, exuviæ, spoils, quasimembranes, cortices, &c. Epicurus and Lucretius supposed spectres of the dead to be pellicles thrown off from corpses which were so thin as to pass through coffins and all other obstructions.

a discourse on diseases, and a learned and elegant description of a pest which in the time of the Peloponnesian war desolated Athens.

The philosophy of this celebrated Poem is of course false and absurd, but in regard to its poetical merit there can be but one opinion. The poet's mastery over his materials is complete. Under his magic touch, speculations the most abstruse and technicalities the most refractory, lose their intractableness, and are converted into forms of exquisite beauty and grace. Great, undoubtedly, are the attractions of a virgin theme. It added to the rapture of Milton, "soaring in the high reason of his fancy with his garland and singing robes about him," the knowledge that he pursued

"Things unattempted yet in prose or rhyme."

So Lucretius, in the opening lines of the fourth book, does not conceal his satisfaction that he is first in the field:

> "Avis Pieridum peragro locs, nullius ante Trita solo: juvat integros adecdere funteis Atque haurire; juvatque novos decerpere flores, Insignemque meo capiti petere inde coronsm, Unde prins nulli velsrint tempora Musæ,"\*

The literalness of this translation must atone for its lack of elegance.

<sup>\*</sup> The Muses' pathless places I explore
Worn by the sole of no one's foot before:
'Tis sweet to untouched fountsins to repair
And drink; 'tis sweet to pluck new flowers; and there
To seek a famous chaplet for my brow
Whence have the Muses veiled no head till now.

The author of the Microcosm, enjoying, in common with these great masters of song, the felicity of a subject unprofaned by previous handling, regrets that he does not possess their power to do it justice. He thinks it strange—that while amid the ignorances and the vanities of a false philosophy two thousand years ago, the poet's heart, instinctively discerning the excellent beauty there is in God's works, veras pulchritudines rerum, was stirred to sing, and in such a manner as to charm the ear of the world

'Principio cœlum ac terras, camposque liqueutes, Lucentemque globum lunæ, titaniaque astra Spiritus intus alit; totamque infusa per artus Mens agitat molem et magno se corpore miscet''—

no one has been found in these last days, after so long waiting, sufficiently kindled and inspired by the exciting discoveries and revelations of modern science, to undertake the task of lifting them into the sphere of poetry, and glorifying them with its light. If there is nothing so mean but it has a divine side—if materials for poetry be not wanting in the most common things, a floating cloud, a spear of grass, or a handful of dust even—how much more may this be said of so lofty a subject as Man, "the mirror of the power of God" reflecting His Maker's image in every part, in the minutest blood-disk and elementary cell, no less than in the complex whole of his

most wonderful organism! In short, if it be the proper business of Poetry to deal with subjects of human interest, what can be more human than humanity itself? Or if its high aim be to discover throughout creation the dazzling tokens of the Beautiful, the  $\tau \delta \kappa a \lambda \delta \nu$ , which is only another name for the Divine, where else in all the universe do the shining footprints of the First Good and the First Fair appear so radiant or so recent as in His last and crowning work, the Human Form? The failure of the present attempt to show it, would prove nothing against the grand poetic possibilities of such a theme. Still it would be true

"How charming is divine philosophy?

Not barsh, and crabbèd, as dull fools suppose,
But musical as is Apollo's lute,
And a perpetual feast of nectared sweets

Where no crude surfeit reigns."



## ADDRESS.

HE Medical Society of New Jersey, hoary with the frosts of a hundred winters, and mindful of its just honors as the oldest organization of

the kind on the Continent, has here met in a place not far from the spot where it was first cradled, to celebrate by special and festal observances, this its first Centenary Anniversary.

It certainly affords remarkable proof of original vigor, and reflects infinite credit upon its earlier and later membership, that, except for a brief space during the Revolutionary War, the Society has never failed to hold regular meetings. In the midst of a thousand changes, the throes of revolution, and the fall of empires, it has stood unmoved. Nations have been born since it came into being. It is older than the Republic. At the time of its formation, its founders were living under British rule, not dreaming of revolt. If they shared in the popular ferment caused by the passage of the odious Stamp Act by Parliament a few months before, they probably had no expectation of seeing matters pushed to the point of open rupture, and forcible separation from the mother country.

The first stone of the Temple erected to Freedom had not yet been laid. The Society was some years old when the first blow for Independence was struck. Lexington and Concord,

#### "Where once the embattled farmers stood, And fired the shot heard round the world,"

were insignificant villages unknown to fame. The brain that conceived the Declaration of Independence was probably revolving far other ideas. On the dazzled mind of no seer or statesman had dawned the unparalled splendors of the Nation that was to be—the constellar glories of that Imperial Commonwealth, composed of a resplendent Sisterhood of States, mighty and populous and ever increasing, joined indissolubly together so as to form one vital organic whole, E pluribus Unum, such as is witnessed to-day.

Those fourteen physicians and surgeons, (let their names be always mentioned with honor,) who, foremost in an enlightened appreciation of the advantages accruing to science and humanity from such an organization, on the 23d of July, A.D. 1766, laid the foundations of this Society—have long since passed away. "After they had served their own generation by the will of God they fell on sleep, and were laid unto their fathers." How inspiring the vision, could they have been permitted to penetrate the future and foresee all that has since happened; the mighty changes which have taken place; the struggles and triumphs by means of which this divinely favored and foreordained Nation has been gloriously carried forward to the culminating felicity of the present time, when

Peace once more smiles through all the land—a glad and righteous Peace—and Slavery, its deadliest foe, the inextinguishable cause of strife and hatred, ever at work to mar

### "The unity and married calm of States,"

has, albeit at an immense cost of treasure and blood, by a perpetual and unalterable constitutional enactment, been ban-ished and driven out of every part of the national domain. How amazing the contrast between now and then! Then there were no railroads, no steamships, no telegraphs, no Hoe's lightning printing presses, no photography, no chloroform. In like manner who can tell what new and startling discoveries will be made in the centuries to come. Methinks

"it were a pleasant thing
To fall asleep with all one's friends,
To pass with all our social ties,
To silence from the paths of men,
And every hundred years to rise
And learn the world, and sleep again,
To sleep through terms of mighty wars,
And wake on science grown to more,
On secrets of the brain, the stars,
As wild as aught of fairy lore,
And all that else the years will show,
The Poet-forms of stronger hours,
The vast Republics that may grow,
The Federations and the Powers.

\* \* \* \* \* \*

So sleeping, so aroused from sleep,
Through snnny decades new and strange,
Or gay quinquenniads, would we reap
The flower and quintessence of change."

Members of the Society! called to address you in the character of President on an occasion so extraordinary, I can say with all sincerity, that however grateful it may be to my feelings to be the recipient of so distinguished an honor, the gratification is largely tempered with the fear that I may not be able to justify the partiality of your selection. My misgivings, I confess, are greater, because of my having ventured upon untrodden paths, and attempted the novelty of a poetical excursion into the arduous fields of human physiology, where few flowers are supposed to bloom. The poetical form, however, may fairly claim this advantage in justification of its adoption, that it allows a more fervid expression of those feelings of devout awe and amazement which the study of the wonders of the human economy is so well fitted to excite.

I offer no apology for mixing up my Religion with my Science; aud make no concealment of the fact, but glory in avowing it, that these are Christian, both one and the other. Nor do I regard it as a just matter of reproach that I make my creed so dominant and positive. Believing firmly that the Christ that redeemed me is the God that made me; not knowing nor desiring to know any other God but Him, I am accustomed to make Him an essential part of all knowledge, discover Him in every discovery of Science, and count all truth dead until He vitalizes it. Any Science of Life, which is not based on the recognition of the fact that "in Him we live and move and have our being," I reckon essentially defective.

A Physiology which has to do with decomposing corpses, rather than living men and women; that puts these into retorts and distils them; or peeps and peers at the minutest shreds and specks of dead tissue through a microscope, and determines a cell to be the ultimate fact of structure, however true, has no right, I conceive, to be supercilious towards those. who, without rejecting what is thus discovered, find room for other things, things that pertain to the spiritual side of humanity, the indubitable facts of consciousness, a soul that soars and delights in freedom, and is not so in love with smallness. as willingly to be cooped up forever into so minute and microseopic a circle, corresponding to a cypher, the symbol of nothingness, to which indeed it closely approximates. that if it comes to pishing and poohing, others, for aught we can see, have as good a right to pish and pooh as those who arrogate so much, the Sadducees of science, who believe in neither angel nor spirit, and are able to find nowhere anything worthy of worship, in this respect showing themselves to be more heathenish than the heathen.

The great Galen, albeit an unbaptized pagan, who lived and wrote in the second century, after reviewing the structure of the hand and foot, and their adaptation to their respective functions, treats us to the following eloquent outburst of pious feeling, breathing a spirit not unworthy of Christianity itself: "I esteem myself as composing a solemn hymn to the Author of our bodily frame, and in this I think there is more true piety than in sacrificing to Him hecatombs of oxen, or burnt

offerings of the most costly perfumes, for I first endeavor to know Him myself, and afterwards to show Him to others, to inform them how great is His wisdom, His virtue, His goodness."

This noble utterance, so honorable to the head and heart of one, who, for 1400 years, ruled from his urn in the great schools of medicine throughout the civilized world with an authority so absolute, that it was reckoned a crime to question it in the smallest particular—sets forth so truly the design I had in view in the following Poem, that I have chosen it as a motto, in connection with that other apothegm of Greek wisdom, "Know Thyself." I style my Poem, "The Microcosm," and in order that I may be more easily followed in the reading of it, I beg to premise an outline of its plan in the following

#### ANALYSIS.

The Poem begins with speaking of Man as the Archetype or ideal exemplar of all animals, whose coming was foretold in a long series of Geologic prophecies from the creation of the paleozoic fishes; and then passes to notice a remarkable anticipation of this accepted doctrine of modern science in the 139th Psalm—Owen, Agassiz and other great lights of Comparative and Philosophical Anatomy agreeing in this—that while man was the last made he was the first planned of all animals—it being easy to trace even in the fins of the fish, a marked resemblance in structure to the bones composing the human arms of which they are homologues—fins, in other

words, being imperfect arms, arms in their most rudimentary condition.

In speaking of the supreme dignity of the human form, viewed as a whole, and of man existing in God as well as of God, occasion is taken to animadvert upon the atheistic tendency of certain materialistic teachings. After which the component parts of the Human Body are taken up in detail, beginning with-I. the SKIN, as its outermost covering and face, (expressing the passions, &c.,) composed of three layers. Below the Skin lie-II. the Muscles, the Organs of Motion, directed by the Will, acting through nervous channels of communication with-III. the Brain, as the Common Sensory, and seat of this, and the other Faculties of the Mind, such as the Understanding, the Religious Sense, Memory, Imagination and Conscience. A secretory function is attributed to the great Ganglions of the Brain (the Gray Substance) of a hypothetical Nervous Fluid which fills the whole body.

The Mind being dependent for its perceiving power on the Organs of the Senses, leads to a consideration of—IV. the Eve in its relation to Light, also to Tears and Sleep. After glancing at the analogous relations subsisting between the Soul and Truth, mention is made of the Founders of Asylums for the Blind; also of Asylums for the Deaf and Dumb. Next comes—V. the Ear in its relations to Sound and Music; and then by a natural transition—VI. the Human Vcice, as being the most perfect of musical instru-

ments. The Mouth and Nose, being concerned in Articulation, brings up—VII. Taste, and—VIII. SMELL. The final cause of Taste being the repair of the Waste the body is constantly undergoing, there follows a description of—IX. Ingestion, Digestion and Assimilation. The Chyle received into the Blood is conveyed to the right side of the Heart, which, besides being the grand Organ of—X. the Circulation and indirectly of Nutrition, is the reputed seat of—XI. the Affections, and stands in general speech as a synonym of Love under its manifold manifestations.

Having noticed the coloring or modifying power of the Viscera in giving Love its distinctive character, as exemplified in Maternal Love and the Love of the Sexes, occasion is taken to speak of—XII. Woman, as distinguished from Man. Of Charity, which is Love in action, or Love viewed in its practical aspect, an apt illustration is found in the devotion and self-denying labors of—XIII. the Conscientious Physician. Reference is made to—XIV. Christ as the Great Physician of Souls; and while contemplating Death in that aspect of brightness which it bears to the believer, allusion is made to the recent departure of a venerable member of the Society, Dr. L. A. Smith. The Poem concludes with—XV. a triumphant anticipation of the Resurrection, when the dead in Christ shall rise with New Bodies made like unto His glorious Body.

## THE MICROCOSM.

Γνωθι σεαυτον.

GROLOGIC PROPHECY OF MAN'S COMING.

WHAT a solemn and divine delight

To pierce the darkness of primeval night—
Through countless generations upward climb

To the first epochs of beginning time:
Back, through the solitude of ages gone,
To the dim twilight of Creation's dawn;
To the dread genesis of heaven and earth,
When pregnant Deity gave Nature birth;
Borne on swift pinions, till our feet we place
Upon the undermost granitic base
Of the round world; and, awe-struck, standing there,
Where all is lifeless, desolate and bare,

Behold the forming of earth's upper crust,
Built up of atoms of once living dust;
Layer on layer rising, rock on rock,
Through lapse of years that numeration mock;
Where lie, in stony sepulchres forgot,
Gigantic organisms that now are not;
And all the various forms of life prevail,
From low to high, in an ascending scale,
Mollusk and fish, then reptile and then bird,
So on to mammal, each o'er each interred—
All pointing forward, in the eternal plan,
To the ideal, archetypal MAN!

#### SCRIPTURAL ANTICIPATION OF THE DOOTRINE.

How oft, what's plain and patent in the Word,
Is by slow Science, painfully inferred!

The truth she took long centuries to unfold,
Had she but known it, was already told.

See, with what ease the Psalmist now unlocks
The secret of the paleozoic rocks:

Inspiring insight given him, to see

The drift and meaning of the mystery;

His, the discoveries of modern boast,

By revelation of the Holy Ghost:

In correspondence, literally exact

With geologic inference and fact,

O'erwhelmed with fear and wonder, hear him speak:\*

"O Omnipresent One! in vain I seek
To bound Thy being, get beyond Thee, go
Where Thou, the Infinite, art not, Oh, no!
If I ascend to heaven, I find Thee; or in hell
I make my bed, I find Thee there, as well:
There is no hiding place from Thee; yea, in the dark
Thou seest me, nor need'st the sun—that spark
Which the insufferable splendor of Thine eye
Did kindle—to reveal me or descry:
Thou hast possessed my reins; didst give me room,
Growth and development in my mother's womb:
My substance was not hid from Thee, when I

<sup>\*</sup> Psalm cxxxix.

Was made in secret, and was curiously In the earth's lowest parts and strata wrought: My perfect whole, was present to Thy thought While yet imperfect; and, in Nature's book, My members were prefigured; each thing took My embryonic likeness; fish's fin, By virtue of relationship and kin, Predicted me: ages before I came. The Ichthyosaurus prophesied the same; Entrails of beast, and wing of bird, supplied Aruspicy and augury, nor lied. Thy works, how marvellous! Thy hands began, And fashioned me continually, to make me man: In all the grand ascent of Nature's stair, O unforgetting God! I've been Thy care: How precious are Thy thoughts to me-their count Is as the sand, an infinite amount!"

# GENEEAL VIEW-MAN SUPREME.

O thou, made up of every creature's best!

The summing up and monarch of the rest!

Thy high-raised cranium, vaulted to contain The big and billowy and powerful brain: While that a scanty thimbleful, no more, Belongs to such as swim or creep or soar; Thy form columnar, sky-ward looking face,\* Majestic mien, intelligence and grace; Thy foot's firm tread, and gesture of thy hand-Proclaim thee ruler, destined to command. A little lower than the angels made, Dominion, glory, worship on thee laid, I praise not thee, but honor and applaud The handiwork and masterpiece of God: Fearful and wonderful, and all divine, Where two worlds mingle, and two lives combine, A dual body, and a dual soul, Touching eternity at either pole: The tides of being, circling swift or slow,

'Tween mystic banks that ever overflow,

<sup>\* &</sup>quot;Pronaque cum spectant animalia cætera terram, Os homini sublime dedit: cælumque videre Jussit, et erectos ad sidera tollere vultus."—Ovid.

Exist not severed from the Fountain head,
But whence they rise, eternally are fed:
Our springs are all in God; from Him we drink,
Live, move, and have our being, feel and think.

# CHRISTIAN SCIENCE.

I value Science—none can prize it more—
It gives ten thousand motives to adore:
Be it religious, as it ought to be,
The heart it humbles, and it bows the knee:
What time it lays the breast of Nature bare,
Discerns God's fingers working everywhere;
In the vast sweep of all embracing laws,
Finds Him the real and the only Cause;
And, in the light of clearest evidence,
Perceives Him acting in the present tense;—
Not as some claim, once acting but now not,
The glorious product of His hands forgot—
Having wound up the grand automaton,
Leaving it, henceforth, to itself to run.

# INFIDEL SCIENCE.

If I mistake not, 'tis in this consists The common folly of the specialists. Bigots of sense, they, with unwearied pains, Searching for soul, find something they call brains: Happy the mystery of life to tell, By help of glasses, they announce a cell: And thereupon they would the world persuade They know exactly how that man is made: 'Tween nought and nought, his origin and end, A cell is all, and all on this depend: They pare his being, make it less and less, Until they reach the goal of nothingness. Their boasted methods failing to find out The soul's high essence, they affect to doubt: To their own notions obstinately wed, They vainly seek the living 'mong the dead. By learning mad, these noodles of the schools Are but a kind of higher class of fools.

Who follows matter through its countless shapes,

While still it vanishes and still escapes;
O'er eagerly pursues the flying feet
Of natural causes farther than is meet,
Losing all trace, and drawing thence too near,
Iuto the bettomless obscure falls sheer:
With atheistic cant, then God ignores,
And turns the Maker fairly out of doors:
Deems certainties of consciousness weigh less
Than the presumptions of a learned guess.

# COMMON SENSE.

Presumptuous though it be, I, with a calm
Audacity of faith, believe I am:
Nor venture with a Maker to dispense,
But trust the sanities of Common Sense:
Hold life, despite of failure to extract,
A thing of firm reality and fact:
Accept the truth, engraven on my heart,
I have a spiritual and immortal part.
If this great universe is a deceit,
I am not able to detect the cheat;

omis

Nor dare I tell the Author of the Skies That He has built on rottenness and lies.

## INVOCATION.

Dear God! this Body, which, with wondrous art,
Thou hast contrived, and finished part by part,
Itself a universe, a lesser all,
The greater cosmos crowded in the small—

I kneel before it, as a thing divine;

For such as this, did actually enshrine

Thy gracious Godhead once, when Thou didst make

Thyself incarnate, for my sinful sake.

Thou who hast done so very much for me,
O let me do some humble thing for Thee!
I would to every Organ give a tongue,
That Thy high praises may be fitly sung;
Appropriate ministries assign to each,
The least make vocal, eloquent to teach.

FLESH GARMENT-SKIN, ITS MORAL CHARACTER.

How beautiful, and delicate, and fresh, Appear the Soul's Habiliments of Flesh! How closely fitting, easy yet, and broad, Each Tissue woven in the loom of God! Compared with that magnificence of drees, Wherewith is clothed the Spirit's nakedness, O how contemptible and mean a thing, The purple and fine linen of a king! The spotless vesture of the silky SKIN, Outside of all, and covering all within, With what a marvellous and matchless grace, Is it disposed and moulded to each place; Bounding and beautifying brow and breast, A crowning loveliness to all the rest! Endowed with wondrous properties of soul That interpenetrate and fill the whole; A raiment, moral, maidenly and white, Shamed at each breach of decency and right, Where dwells a charm above the charms of sense, Suggestive of the soul's lost innocence.

#### PATHOGNOMY.

Who has not seen that Feeling, born of flame.\* Crimson the cheek at mention of a name? The rapturous touch of some divine surprise, Flash deep suffusion of celestial dyes; When hands clasped hands, and lips to lips were pressed, And the heart's secret was at once confessed? Lo, that young mother, when her infant first Gropes for the fountain whence to quench its thirst; With outstretched tiny hands, to eager lips Conveys the nipple, and the nectar sips;— As on her yearning breast, she feels the warm Delicious clasp of its embracing arm, How thrills the bosom, and how streams the wine! How her frame trembles with a Joy divine! Not Joy, not Love alone here take their rise. The chosen seat of mighty sympathies— Electric with all life, Religious Awe, Here holds its empire and asserts its law. At dead of night when deep sleep falls on men,

\* Aristotle calls Love, "τι θερμὸν πρᾶγμα"—a certain flery thing.

Terror and trembling came upon me;—then A spirit passed before my face: the hair Stood up upon my shuddering flesh—and there Was silence—all my bones did shake— A voice the preternatural stillness brake: "Shall mortal man, whose origin is dust, Arraign his Maker, claim to be more just?" Contending Passions jostle and displace And tilt and tourney mostly in the Face; Phantasmagoric shapes appear and pass, Distinctly pictured in that magic glass; Their several natures, instantly imbued With the complexion of the changeful mood-Ashes of Grief, and pallor of Affright, Blackness of Rage, and Hatred's wicked white, The immortal radiance of Faith and Hope, Like that which streamed on Stephen's from the cope— The hidden depths of being, stirred below, Thoughts, passions, feelings, upward mount for show; Unmatched by Art, upon this wondrous scroll

Portrayed are all the secrets of the Soul;
Upon this palimpsest, writ o'er and o'er,
Each passing hour is busy penning more;
Events, that make the history within,
There published on the surface of the Skin.

# INTERIOR VIEW-SKIN DISSECTED.

What lies below this beautiful outside? What proofs of power and wisdom does it hide? To eyes instructed and divinely keen, The Shekinah, the Cherubim between, Was not more visible than the Godhead here, Nor spake more audibly to human ear. For from the centre to this far extreme And corporal shore of being, Love supreme Its miracles magnificent has wrought, Embodying the Maker's perfect thought. Would you explore the Mysteries of Life? Dissect in fear, use reverently the knife-All was made sacred to some holy use, Whate'er the profanations of abuseCut not with blundering and careless hand,

If you the fleshly maze would understand;

For that the task is difficult, it needs

The skill and knowledge which experience breeds.

BLENDING OF CONTRARIES-STRUCTURAL DETAILS.

Now that the Dermal Covering is cut through, And its interior structure brought to view, Pause, if you will, and let your aided sight Peruse the wonders of Creative Might. Admire the skill that can in one combine A Sensibility and a Touch so fine— Making the Skin throughout the purpose serve Of one ubiquitous great surface nerve, That finest needle, would it entrance gain, Must pierce the sense and stab the soul with pain; Where camping armies of papillæ wait, Manning each fortress, guarding every gate, Armed at all points, and vigilant as fear, To sound th' alarm when danger hovers near-And yet, despite this nicety of sense.

Formed for coarse uses, and for rough defense:—
An imbricated Armor, scale on scale,\*
Twelve thousand millions form a coat of mail,
Flexile and fine, or horny else and hard,
The trembling nakedness of sense to guard:
A colored Retè delicately spun,
Quenching the fiery arrows of the sun,
Spreads soft above, and undulating dips
Between the sentient papillary tips,
Part of the duplex Corium, beneath

<sup>\*</sup> The Skin as here described includes: 1. the Cuticle with its innumerable microscopic tiles specially designed for defence; 2. the Rete Mucosum, the seat of color; 3. the Corium or True Skin, consisting of two non-separable layers—the upper, papillary and sensitive, the lower firm and fibrons; 4. Perspiratory tubes, convoluted beneath the true skin, their spiral ducts opening obliquely under the scales of the Cuticle, their office being to purify and cool the body; 5. Sebaceous Follicles, or Oil Glands, seated in the substance of the skin, serving to soften and lubricate the surface, furnishing likewise, perhaps, 6, that Distinctive Odor peculiar to each individual whereby he sows himself on all the winds, and perfumes with every footstep the ground over which he passes; 7. the Hair, implanted by a bulbous root in the fibrons layer of the Corium, which being contractile shrinks under the influence of great fear or horror, and as the poet says:

<sup>&</sup>quot;Makes each particular hair to stand on end Like quills upon the fretful porcupine"—

quills in the porcopine, feathers in the bird, wool and hair in the quadruped all belonging to the same category. Hair in man, not being needed for warmth or covering as in the lower lives, is gathered to the head and appropriately crowns it.

Forming a continent elastic sheath, Felted and firm and suitable to bind, Muscle and viscus to the place assigned: Where nine full leagues of Tubing buried lie, All convoluted opening to the sky, Transmitting formed impurities within, Through doors and windows of the porous skin; Th' exuding moisture tempering inward flame, Cooling the fever of the heated frame: Fountlets and Rivulets of Oil below, Preserving softness, ever spring and flow; Musk emanations, to the dog defined, Snuffing his master on the scented wind; Hair, not for warmth or dress, here sparsely spread, Reserved to ornament the regal head, Around the brow of Eva thickly curled And crowning Adam monarch of the world. VOLUNTARY MUSCLES-THEIR OFFICE AND WORK. Lifting this threefold Veil, we find—beneath A dense, enclosing, universal sheath-\*

<sup>\*</sup> The enveloping aponeurosis or fascia binding down the muscles.



The subject Muscles,\* girded to fulfil The lightning mandates of the sovereign Will, Th' abounding means of motion, wherein lurk Man's infinite capacity for work: By which, as taste or restless nature bids, He rears the Parthenon or Pyramids; In high achievements of the plastic art, Fulfils th' ambitious purpose of his heart; Creates a grace outrivaling his own, Charming all eyes—the poetry of stone: Symbols his faith, as in Cathedrals—vast Religious petrifactions of the Past: Covers the land with cities; makes all seas White with the sails of countless argosies: Pushes the ocean back with all her waves, And from her haughty sway a kingdom saves;

<sup>\*</sup> Some authors reckon the number of Muscles in the Humau Body as high as 527. They have been divided into Voluntary (forming the red flesh, or the main bulk of the body;) Involuntary, such as the heart, fleshy fibres of the stomach, &c.; and Mixed, such as the muscles of respiration, &c. Each Muscle is made up of an indefinite number of fibres, which may be considered as so many muscles in miniature, along which stream the currents of the Will. Yet with all this complex apparatus every thing is in harmony.

Tunnels high mountains, Erebus unbars,

And through it rolls the thunder of his cars:

With stalwart arm, defends down-trodden right,

And, like a whirlwind, sweeps the field of fight;

And when, at last, the war is made to cease,

On firm foundations, stablishes a peace;

Then barren wastes with nodding harvests sows,

And makes the desert blossom as the rose.

MUSCULAR DYNAMICS-DIRECTING POWER WHERE?

Bundles of fleshy fibres without end,

Along the bony Skeleton extend

In thousand fold directions from fixed points

To act their several parts upon the Joints;

Adjustments nice of means to ends we trace,

With each dynamic filament in place.

But where's the Hand that grasps the million reins,

Directs and guides them, quickens or restrains?

See the musician, at his fingers' call

All sweet sounds scatter, fast as rain-drops fall;

With flying touch, he weaves the web of song,

Rhythmic as rapid, intricate as long.

Whence this precision, delicacy and ease?

And where's the Master that defines the keys?

The many jointed Spine, with link and lock

To make it flexile while secure from shock,

Is pierced throughout, in order to contain

The downward prolongation of the brain;

From which, by double roots, the nerves\* arise—

One Feeling gives, one Motive Power supplies;

In opposite directions, side by side,

With mighty swiftness there two currents glide;—

Winged, head and heel, the Mercuries of Senset

<sup>\*</sup> For the benefit of the general reader, preaumably not familiar with anatomical details, we may state that there are 43 pairs of nerves in all, i. e. 12 Cravial or Encephalic and 32 Spinal. The first have only one root in the brain, whilst the latter arise by two roots from the anterior and posterior halves of the spinal marrow, but unite immediately afterwards to form one nerve. Division of the anterior root causes loss of motion—of the posterior the loss of sensation. The first transmit volitions from the brain, the latter sensitive impressions to the brain.

<sup>†</sup> Helmholtz has instituted experiments to determine the rapidity of transmission of the nervous actions. For sensation the rate of movement assigned is one hundred and eighty to three hundred feet per second. Muscular contraction, or shortening of the muscular fibre takes place, at times, with extreme velocity; a single thrill, in the letter R., can be pronunced in the 1-30,000th part of a minute. There are insects whose wings strike the air thousands of times in a second. The force of contraction (Myodynamis) is most remarkable in some of these. In birds, the absolute power in proportion to the weight of the body is as 10,000 to 1.

Mount to the regions of Intelligence;
Instant as light, the nuncios of the throne
Command the Muscles that command the Bone.

Each morning after slumber, brave and fresh,
The Moving Army of the Crimson Flesh,
From fields of former conquests, marching comes
To the grand beating of unnumbered drums—\*
Each martial Fibre pushing to the van
To make "I will" the equal of "I can;"
Testing the possibilities of power
In deeds of daring suited to the hour;
Doing its utmost to build up the health
And glory of the inner Commonwealth.

Levers and fulcra every where we find,

But where's the great Archimedean Mind,

That on some POU STO,† outside and above,

Plants its firm foot this living world to move?

<sup>\*</sup> The heart and arteries.

<sup>†</sup> Archimedes used to say, "Give a place where I may stand, ( $\delta \sigma \tau \sigma v \sigma \tau \tilde{\omega}$ ) and I can move the world."

### CRANIUM-SOUL'S FIRMAMENT-BRAIN.

Find it we shall, if anywhere we can, Doubtless, in that high Capitol of man, Whose Spheric Walls, concentric to the cope, Were built to match the nature of his Hope. What seems the low vault of a narrow tomb, Is the Soul's sky, where it has ample room; As apt through this, its crystalline, to pass, As though it were diaphanous as glass. When Sense is dark, it is not dark, but light, Itself a sun. that banishes the night, Shedding a morning, beauteous to see, On the horizon of Eternity. Strange, a frail link, and manacle of BRAIN So long below suffices to detain A principle, so radiant and high, So restless, strong, and fitted for the sky.

#### MIND'S ORGAN-CITY OF THE DEAD.

Here mounted, standing on the topmost towers, Up to the roof of this high dome of ours, With the Mind's Organ in our hands, what new
Secrets of structure strike th' astonished view?

A weird, and wonderful, and fragile mass
Of white and gray\*—deserted now, alas!
All knowledge quite razed out; no trace
Of things which were: now mourns each happy place,
Where frolicked once the Children of the Mind;—
Of all the number, not one left behind:
No vestige of the battle and the strife;
None, of the conquests that ennobled life.
Hid is the maze where Doubt was wont to grope;
Hid the starved fibre of a perished Hope:

<sup>\*</sup> The Nervous System everywhere consists of two kinds of tissue-White and Gray. The White forms the nerves, the exterior of the spinal cord, and the central parts of the brain and cerebellum, (where it is soft, like curdled cream, but is firmer in the nerves.) composed everywhere of parallel fibres or threads of extreme fineness, which form the Channels of nervous power and infinence to and from the Ganglionio Centres and Sources, both great and small, of this influence, constituting the Gray suhstance found in the central parts of the spinal cord, at the base of the brain in isolated masses, and the exterior of the cerebrum and cerebellum, where to economize space it lies in folds, dipping down into the interior, and forming the convolutions. It is found also in the ganglia of the Great Sympathetic. Condensely stated, the gray ganglia originate nervons power, the white nervous filaments only transmit it. The Hemispherical Ganglia (the plaited or convoluted cortex of the cerebrum) forming about ninetenths of the whole mass of the brain, although entirely destitute of both sensibility and excitability, are believed to be on good grounds the special

Hid the tough sinews of a wrestling Faith—
The Christian Athlete matched with Sin and Death:
Hid all the teeth-prints of the wolves of Grief—
A savage pack, of which Remorse is chief.
How strange, of all the wounds our comforts mar,
That of the fellest we should find no scar!

None can point out where Understanding dwelt:

None, the high places where Religion knelt:

The spot where Reverence, with feet unshod,

Came to consult the Oracle of God:

The crypts and catacombs, where Memory cast
The bones of all the dead of all the Past;
Shelves, where were stowed all libraries of man,

seats, so far as these can be said to have any, of the intellectnal faculties—memory, reason, judgment and the like. Impressions, conveyed to the Spinal Cord, i.e. its ganglionic centre, are there organically, not intellectually perceived, and the movements which follow are such as are dictated by supreme organic wisdom, forming indeed an admirable mimicry of conscious sensation and voluntary action, but mimicry only, for both are really absent. This belongs to what is called "reflex action," and explains automatic function and phenomena, of which life is full. It is not, it is believed, until impressions have reached the ganglion of the Tuber Annulare that they are converted into conscious sensations and excite voluntary movements. And only when they have mounted to the Hemispheres, the ganglia of thought and feeling, that they become the property of the intellect and are made the grounds of rational conduct.

All grev traditions, since the world began; All literatures, religions, kinds and parts Of knowledge, laws, philosophies and arts; All actions, all articulated breath-The Book of Life, and ah! the Book of Death,-Wherein, whatever fatal leaf it turned, Its former self the guilty soul discerned, Mirrored entire—seen outside and within In every form and attitude of sin; Th' inevitable reflection, imaged there, True to the life, like pictures of Daguerre; The very scene, in which each deed was done, Painted in all the colors of the sun: So faithful, fresh, time, circumstance and act, The past reality seemed present fact— There field, and weapon, and the riven brain Of Abel smitten by the hand of Cain, And blood, with red moist lips, in Pity's ears Crying for vengeance through eternal years. Th' unwashed crimson of the guilty sodAs in the eye and memory of God.

IMAGINATION'S skyey seat, where came For soaring flight the demigods of fame, Home of the Muses, fair and forked Mount Of high Parnassus, and Castalian Fount, Whence issued streams that watered all the earth, Then most, when blind Mœonides had birth; And Zion's holier Hill, and Siloe's Brook, Warbling forever, in blind Milton's book; The topmost peak where Shakespeare took his stand, And waved his wand of power o'er sea and land. Strange, that so sweet and heavenly a hill, Should breed fierce dragons, ravenous beasts of ill, "Gorgons, and hydras, and chimeras dire," Monsters of hideous shapes, with tongues of fire: Have rifted rocks whose entrance leads to hell And the damned wizard of the mighty spell,— Making its precincts all enchanted ground, Turning to horror every sight and sound; With grisly terrors, straight from Acheron,

Peopling each nook, and darkening all the sun.

None can the judgment seat of Conscience show,
That highest Court and Parliament below,
Where, sole and sovereign, seated on her throne,
She recognized th' Infallible alone.
To her, the keys of heaven and earth were given,
And what she bound on earth was bound in heaven.
By the clear light, which her decisions shed,
Instructed feet in pleasant ways were led,
Martyrs were pointed to the neighboring sky,
And Patriots taught how sweet it is to die.

Where these had their high dwelling, we, in vain,
Seek in this packed and folded pulp of brain:
Judged, by the ignorant regards of sense,
How mean! by heights of function, how immense!
To reason and the vision of shut eyes
Its infinite expandings fill the skies.
What regions of sublimity once there!
What mountains soaring in the upper air—

Not thunder scarred Acroceraunian\* peak
Alpine or Himalayan loftier than the Greek
So high so hidden—from whose secret tops
Keener than needles, trickled the first drops
Of rising rivers, flowing silently
Into the cerebral deep drainless sea,
From which, as from a mighty fountain-head,
Life's crystal waters everywhere were spread,
Coursing in liquid lapse through Channels White,†
Swift as the lightning, stainless as the light,

<sup>\*</sup> A range of very high mountains in Greece, (from  $\partial\kappa\rho\sigma\varsigma$ , extreme, and  $\kappa\epsilon\rho\sigma\nu$ ), thunderbolt,) so called because their peaks are often struck by lightning.

<sup>†</sup> The Nerves are composed of bundles of minute fibres or filaments, averaging 1-2,000 of an inch in diameter. Each filament consists of a colorless, transparent, tubular membrane, containing a thick, softish, semifluid nervons matter which is white and glistening by reflected light. Running through the central part is a longitudinal grayish hand, called 'the axis of the cylinder.' Branches of a nerve are merely separations and new directions of some of the filaments of the handle, these being always continuous from their origin to their point of distribution, which prevents any confusion arising from a running together of impressions. The nervons tree, like that of the blood vessels, is so vast, that in its totality, exhibited separately, it would give almost an outline of the human form. The circulation of a nervous fluid, though not demonstrable, has been hypothetically deduced from the tuhular structure of the nerves and other considerations. Assuming the fact, the whole body may be said to swim in this vital sea, having its analogy in that higher or divine animation, described as being "filled with the Spirit."

Conveying to each atom of the whole Volitions, animations, power and soul.

Once beautiful for situation, gem

And joy of the whole earth, Jerusalem,
How sits she solitary! she that was great

Among the nations, now left desolate!
Th' adversary hath spread out his hand
On all her pleasant things and spoiled the land:
Her gates are sunk into the ground: the rent

And ruined rampart and the wall lament:
Her palaces are swallowed up: the Lord

His altar hath cast off: He hath abhorred

His sanctuary even: hath o'erthrown

And pitied not, nor cared to spare his own.

## EYE, AND ITS CORRELATIVE.

The ways of Zion mourn; funereal gloom

Fills every habitation like a tomb;

Closed is each port, and window of the mind;

And there is none to look—the Exe is blind.

How different once, when in that little Sphere,

The glorious universe was pictured clear!

O what an Organ that! germane to Light,

Whose own relations too, are such to sight,

'Twere hard to say, the two so nicely fit,

Made was the eye for light, or light for it.

Ne'er were two lovers, separate by space,

More eager, fond, impatient to embrace,

Than that sweet splendor—streaming from afai,

Traveling for ages from some distant star,

Straight as an arrow speeding from the bow—

And that dear Eye-ball waiting here below.

Prime work of God! upon the bended knee
The whole creation homage pays to thee:
From night and chaos countless suns emerge
That all their beamings may in thee converge;
Since wholly vain and useless were, they know,
Without the Eye to see, their light to show:
They roll in darkness, quenched their every ray
Till thy lids opening, change the night to day.

Placed, for commanding and enjoying these, In the dread centre of immensities, The depths thou searchest and the heights supreme, Ranging at will from this to that extreme. Where space is dark to thy unaided sight, Thither thou turn'st thy telescope of might, And in the heart of the abvsmal gloom Behold'st celestial gardens all abloom-Brave starry blossomings and clusters fine Loading the branches of the heavenly vine: See'st suns, like dust, lie scattered 'long the road That leads to that far Paradise of God. From this to yonder, who the leagues can tell? One might compute the ocean's drops as well. Turn now: the nether infinite explore: Extend thy vision, as thou didst before:\* Pierce downwards, pierce to the concealed minute, The ultimates of things, the germ, the root, The atom world, so near—and yet so far

<sup>\*</sup> For example, with a Microscope that magnifies a million times.

Not more remote is the remotest star—
To forms of life to which, O can it be?
A drop of water is a shoreless sea.
So vast thy sweep, it surely were not strange
If eye angelic had no wider range.
Even so! On earth or in the realms of air
Nothing is fair but as thou mak'st it fair—
In face or flower or iris braided rain,
Beauty exists not or exists in vain;
Without thy power to paint them or perceive
There were no gorgeous shows of morn and eve.

LIGHT LOST IN THE EYE REAPPEARS IN THE CONSCIOUSNESS.

How wonderful, that organs made of clay
Should drink so long th' abundance of the day!
Receive the constant unreturning tides
Of snn and moon and all the stars besides!
Not lost is all this mighty wealth of beams:
Rivers of light, innumerable streams,
Flow darkling for a space, then spring again

To join the Arethusas\* of the brain,
In bliss of married consciousness to be
Fountains of brightness through eternity.

TEARS-SLEEP: ITS RESUSCITATING POWER-ORGANIC LIFE.

Since man was born to trouble here below,

Tears were provided for predestined woe;

And tears have fallen in perpetual shower

From man's apostasy until this hour;

But there 's the promise of a future day

When God's dear hand shall wipe all tears away.

On eyes that watch as well as eyes that weep
Descends the solemn mystery of Sleep.
Toiling and climbing to the very close,
The weary Body, longing for repose,
On the gained level of the day's ascent,
Halts for the night and pitches there its tent:
Then, sinking down, is 'gulphed in an abyss

<sup>\*</sup> The river Alpheus in Elis is fabled to flow under the earth to Sicily, and to unite with the fountain Arethusa; hence Arethusa, a nymph, whose lover was Alpheus.

As deep and dark as the abodes of Dis-\* Rather, returns into the peaceful gloom And blank unconsciousness of nature's womb, Where plastic forces work, to be next morn To a new life and mightier vigor born ;-Prepared to run again Life's upward way Scaling the misty summits of To-Day: Lo! height o'er height, through all the years, they rise, Supplying steps by which to mount the skies,-Ladder, like Jacob's, heavenly, complete, Whose radiant rounds were for angelic feet. From night's dark caves spring evermore, in truth, Fountains of freshness and perpetual youth: This seeming death, with consciousness at strife, Is health and happiness and length of life. There is within, that which preserves and keeps-Organic Providence that never sleeps:-When the slack hand of Reason drops the rein, This drives the chariots of the heart and brain.

<sup>\*</sup> Domos Ditis.

Were life's full goblet trusted to the Will,

Its nerveless hand would soon its contents spill;

The Maker so was careful to provide

Another principle and power beside,

Archéus,\* Instinct—any name may serve—

Organic Life, Great Sympathetic Nerve,†

With Cerebellum,‡ competent to save,

<sup>\*</sup> The Archæus, according to Van Helmont is an immaterial principle, existing from the beginning ( $a\varrho\chi\eta$ ) and presiding over the development of the body and over all organic phenomena. Besides this chief one, which he located in the upper orifice of the stomach, he admitted several subordinates, one for each organ, each of them being liable to anger, caprice, terror, and every human feeling.

<sup>†</sup> The Great Sympathetic lies in front and along the sides of the spine, and supplies the organs over which the will and consciousness have no immediate control, such as the intestines, liver, heart, &c. Its numerous ganglia (centres and originators of nervous influence) are the knots of a nervous reticulation which connects not only the organs of organic life one with the other, but these also with the brain and spinal cord. It is due to this—separately or conjointly with the spinal cord in its reflex or excitomotor capacity, derived from its own ganglionic axis or pith, giving it also independent and automatic powers, powers not sensibly dependent npon the consciousness or will for their exercise—that all the vital functions do not come to a stand still in our first simmber.

<sup>‡</sup> The opinion, which attributes to the Cerebellum the power of associating or co-ordinating the different voluntary movements, is the one now most generally received. Destroyed, the gnbernatorial faculty is lost and the animal staggers and falls like a drunken man. In addition to this, it has been supposed, that whatever the cerebrum does rationally and by fits, the cerebellum does unconsciously and permanently—so that in sleep, the motions of thought and will not being organically but only consciously sus-

And rescue from the clutches of the grave,—
When Sleep would else have caused immediate death,
Stopped the heart's action, and cut short the breath,
Drying each source, that fed and kept alive
Th' industrious bees in the organic hive.\*

#### SPIRITUAL ANALOGIES.

As light to Eye, so to the Soul, in sooth,

The light of God, the higher light of Truth.

How, when man fell, his dark and hungry eyes

Looked for the sunrise in the eastern skies!

Filled with all doubt, and wandering forlorn,

Watching for signs of the delaying morn!

Ah! should it never break, the stumbling feet

pended, need to he maintained and kept up to their proper level, and that this is the office of the cerehellum, which like the chain and springs of a watch, not only regulate its movements, but prevent it from running suddenly down.

<sup>\*</sup> While an exaggerated importance may have been given to the doctrine of Cell Formation, the truth of it seems to he well established. The state ment of Virchow that, "Every animal presents itself as a sum of vital unities, every one of which manifests all the characteristics of life," although hypothetical, at least in part, is a convenient formula for explaining many vital phenonmena observed both in health and disease. Receiving it, it certainly justifies the figure here used—the hee working with a blind instinct, being compared to that organic intelligence, which resident in each cell presides over the functions of nutrition, secretion and elimination.

Go stumbling onward to the Judgment Seat; And toward the guilty, should there be no ruth In the just bosom of the God of Truth; Those images of horror and affright, Projected on the canvass of the night, Should ave be present, wheresoe'er he turn, And God's fierce anger never cease to burn! Ah! when the parting heavens some gleam let through, Some gleam of promise shining through the blue;— Ah, more! when that the Dayspring from on high Told that the Sun of Righteousness was nigh;— Waving glad wings of many colored flame, Fore-running angels certified He came;— Then most of all, when following full soon, Upon his midnight burst eternal noon;— How to the heavenly host his pulses beat, Timed to the music of their marching feet! CONGENITAL BLINDNESS-AWARDS OF THE LAST DAY.

Alas, for those, who, haply blind from birth,

Have never seen the loveliness of earth:

To whose rapt gaze, the spectacle ne'er given,
Of all the dread magnificence of heaven:
One mighty blank, one universal black,
The moving wonders of the Zodiac:
The constellations from their fixed abode,
Shed no sweet influence on their darkling road:
Their rolling eyeballs turn, and find no ray;
An unknown joy, the blessedness of day.

Between the man, who, in his neighbor's grief,
With swiftest pity, flies to his relief;
And him, whose cruel and unnatural part
It is to plague and wring his brother's heart,
How deep the gulf! how different the award,
At the great final coming of the Lord!
In the Last Judgment, all the world shall hear
The silent thunder prisoned in a tear\*—

<sup>\*</sup> Faraday has shown by the most conclusive experiments, that the electricity which decomposes, and that which is evolved by the decomposition of a certain quantity of matter are alike. A single drop of water therefore contains as much electricity as could be accumulated in 800,000 Leyden jars—a quantity equal to that which is developed from a charged thunder cloud.

The pent up wrath shall strike the tyrant there, Who would not pity, and who would not spare.

## ASYLUMS FOR THE BLIND.

Thou, who wert styled th' Apostle of the Blind,
No bays too green, thine honored brows to bind;
Who toiled and sacrificed beyond the sea—
'Tis right to name thee, Valentin Haüy!\*
To render happier a cheerless lot;
Enrich with knowledge those who have it not;
To pour new light into the darkened mind,
And force an entrance where it none can find;
By novel methods, and ingenious tools,
Imparting all the learning of the schools;
For loss of one, obtaining recompense,

<sup>\*</sup> Louis IX., better known as St. Louis, in 1260 founded the Hospice des quinze vingts at Paris—designed, as its name impiles, originally for 15 score or 300 persons—which still exists. This is believed to have been the first public provision ever made for the Blind. It was solely eleemosynary. No instruction was attempted. Although in the 16th century attempts were made to print for the Blind in intaglio and afterwards in relief, nothing material was accomplished, till 1784, when Valentin Haüy, "the apostle of the blind" as the French named him, commenced his arduous, and self-denying labors, and laid the foundations of the modern system. His pupils became eminent as musicians or mathematicians.

In the perfection of another sense;
Inspiring music, bringing heaven so near,
They almost think they see it as they hear;—
Is like that work, in kind if not degree,
Done Bartimeus, when Christ made him see.

ASYLUMS FOR THE DEAF AND DUMB.

Not less their praise, nor less their high reward,
Th' unequaled heroes of a task more hard
Enthusiasts, who labored to bridge o'er
The gulf of silence, never passed before,
To reach the solitaire, who lived apart,\*
Cut off from commerce with the human heart:
To whom had been, all goings on below,
A ceremonious and unmeaning show;

<sup>\*</sup> The possibility of teaching the Deaf and Dumb was never conceived by the ancients. Useless to the State, their destruction in infancy was even connived at; and they were classed legally with idiots and the insane. Plunged in a night of the profoundest ignorance, sitting apart in ntter loneliness, their state was the saddest possible. Attempts to instruct them belong mostly to modern times. Three systems have been adopted in different countries. 1. That of Wallis, Pereira, Heinicke and Braidwood, which falsely assumed that while signs may give vagne ideas there can be no precision without words. Consequently the first years under this system were devoted almost wholly to learning articulation and reading on the lip. 2. That of abbé De l'Epée as improved by Sicard and

Men met in council, on occasions proud,

Nought but a mouthing and grimacing crowd;

And all the great transactions of the time,

An idle scene or puzzling pantomime.

Children of silcnce! deaf to every sound

That trembles in the atmosphere around,

Now far more happy—dancing ripples break

Upon the marge of that once stagnant lake,

Aye by fresh breezes overswept, and stirred

With the vibrations of new thoughts conferred.

No more your minds are heathenish and dumb,

Now that the word of truth and grace has come;

Your silent praise, that penitential tear,

Are quite articulate to your Saviour's ear.

Bebian, which proceeds on the directly opposite theory that there is no idea which may not be expressed by signs without words. Sign language has the important advantage, besides many others that might be named, of being universal.

3. The American system, which is a further modification of De l'Epée's. The number of deaf nutes who have distinguished themselves in science and art is already quite considerable. My friend, Mr. John R. Burnet, farmer and anthor, living at Livingston, N. J., is one of the best informed men in the State.

HEARING-POWERS OF SOUND-MUSIC OF NATURE.

Within a bony labyrinthean cave, Reached by the pulse of the aërial wave, This sibyl, sweet, and mystic Sense is found— Muse, that presides o'er all the Powers of Sound, Viewless and numberless, these everywhere Wake to the finest tremble of the air: Now from some mountain height are heard to call; Now from the bottom of some water-fall; Now faint and far, now louder and more near, With varying cadence musical and clear;— Heard in the brooklet murmuring o'er the lea; Heard in the roar of the resounding sea; Heard in the thunder rolling through the sky; Heard in the little insect chirping nigh; The winds of winter wailing through the woods; The mighty laughter of the vernal floods; The rain-drops' showery dance and rhythmic beat, With tinkling of innumerable feet; Pursuing echos calling 'mong the rocks;

Lowing of herds, and bleating of the flocks;
The tender nightingale's melodious grief;
The sky-lark's warbled rapture of belief—
Arrow of praise, direct from nature's quiver,
Sent duly up to the Almighty Giver.

MUSIC OF ART-INSTRUMENTAL AND VOCAL,

If once, ye Powers, with reeds, a rustic Pan,
Ye tuned idyllic minstrelsies for man,
These thin dilutions of the soul of song,
Ye have abandoned, and abandoned long.
Sweet as the spheral music of the skies,
The thunder of your later harmonies.
O fill the void capacious atmosphere
With your full sum, and pour it in the ear;
Drown it with melody, nor let it wade
Longer in shallows, of the deep afraid.
Join to all instruments of wind and cords
The poetry and excellence of words.
If Country calls, put in the Trumpet's throat
A loud and stirring and a warlike note;

And let there follow an inspiring blast,

As the long file of heroes hurry past;

Then raise th' exultant clamor to its height,

When crowned as victors, they return from fight.

Because the service God demands of men

Is not an intermittent thing of now and then,

Temples of permanence we rightly raise,

For the perpetual purposes of praise;

And build great Organs, in whose tubes of sound,

Sleeping or waking, ye are always found:

Awake! prepare Te Deums! now awake!

Wave your great wings till all the building shake!

Rend the low roof, and rend the vault of heaven,

Bearing the rapture of a soul forgiven!

VOICE-AIR OF EXPIRATION, ITS TRANSMUTATIONS.

Wonderful instrument, but not so choice
As is the Organ of the Human Voice.
What compact proof of Heavenly Power and Skill,
When simplest means sublimest ends fulfill.
That two stringed Lyre, quick strung to every note,

Placed at the windy entrance of the throat— With a divine economy of room, So placed it might the smallest space consume, There where the aërial currents come and go, To feed the vital fires that burn below, And with a quickening purifying force, The blood to freshen in its onward course— Taking the waste, effete and useless breath, Charged with the very element of death, Converts it into music, glorious shapes Of power and beauty, ere that breath escapes. A transformation marvellous and strange, Unequalled, in the Alchemy of change. Harmonious forces working to condense The blazing jewels of intelligence: Diamonds more rich than proudest monarchs wear, Formed from the gaseous carbon of the air: Th' imperial currency of human wit. Image and superscription stamped on it. Coined from the atmosphere, th' exhaustless mine

Of golden treasures magical and fine;
Chief circulating medium of thought,
And common mintage by which truth is bought,
And wisdom in its infinite supply,
Stored in th' invisible market of the sky!

SPEECH ACCOUNTABLE: SELF-RECORDING-MATHEMATICAL PROBLEM.

O Heart and Mouth—in strictest wedlock bound—Whence spring th' immortal births of soul and sound! Winged for far flight, your moral offspring sweep

The airy fields of the cerulean deep,

Up to the awful place, where Judgment waits

Within Eternity's tremendous gates.

Philosophy itself may serve to teach

No power so fearful as the Power of Speech:

The idle word, which nothing can recall,

Breaks sacred silence thrilling through the All;

Yea, like a pebble dropped into the sea,

Ripples the ocean of immensity:

An eath profane, the horror of a lie,

The shuddering Ether bears beyond the sky;

Sounding through height and depth, its way it takes
To distant spheres, and endless echos wakes:
After long ages, still can be inferred,
The sense and nature of each uttered word,
Declared in postured particles, because
The dance of atoms is by rhythmic laws:
For that another cannot be the same,
God calls each atom by a different name;
Makes these an alphabet, by which to spell
Each sentence spoken, and each syllable;
Beyond the power of parchment, or of pen,
Expounding all the utterances of men.\*

<sup>\*</sup> Mr. Charles Babbage, an English Mathematician of the first rank, formerly Lucasian Professor of Mathematics at Cambridge, the Chair of Newton, famous also as the inventor of a Calculating Machine, built at a cost to the English Government of \$85,000. followed by another involving a still heavier outlay—in a work styled "The Ninth Bridgewater Treatise," published in 1838, filled with much original and quaint speculation, expresses his faith in the startling doctrine that no word or action can ever be eliminated from the records of Nature, but that the air is a "vast library." in whose pages are forever written all that man has ever said or woman whispered, inasmuch as the aërial pulses which seemed to have died out completely might yet be demonstrated by human reason to exist. So of the ocean. A being possessed of unbounded powers of mathematical analysis might trace the results of any impulse on the fluid, or read back the history of the sea in its own billows. And so too, the solid frame of

ITS SOCIAL USES-THE WORD MADE FLESH.

Most genial of the faculties is this.

And most subservient to social bliss;

Fulfills the longing as no other can,
When man would manifest himself to man;

The isolated soul shut up no more

Walks freely forth as through an open door.

Vainly in inarticulate dumb show,

Had Nature strove to teach man here below;

When finding, that intended to reveal,

Served but the more His presence to conceal,
God put aside the Vesture of the Skies,

And walked and talked with men in Human Guise:

Th' apocalyptic Word, made Flesh, made thus

Communicated Godhead—God With Us.

the earth may serve as a stereotyped record both of the transactions and the proceedings of its inhabitants; for not only the heavings of the greatest earthquakes, but the little local tremors which the stamp of a human foot may produce, may all be said to have left their memorials in the ground. Heaven and earth are therefore prepared to bear witness against the transgressor on the Day of Judgment. Terrible thoughts these, but what if they are true?

ARTICULATION—NORE—MOUTH—SMELL—TASTE.

Behold how man, the polyglot, employs Th' uncompounded elemental noise! Makes endless permutations, mixes breath For nice intonings of each shibboleth! Up from the Throat, one little step, we reach The cunning moulds and matrices of speech; Formless and void the vocal chaos flows, Shaped into Language by the Mouth and Nose; Mellifluous modulations taking place, In scented caverns of the hollow face; Sweet mobile Lips, Teeth, Palate, flavorous Tongue, Making intelligible the speaking Lung; Aiders of Speech, but then the seats as well Of the two senses of the Taste and Smell. SMELL-ODORS: THEIR SUBTLETY AND IMPONDERABILITY. The Nerves of Smell, the first the brain to leave, Combed and divided through a bony sieve,\* They, from their tresses of disheveled hair

<sup>\*</sup> The ethmoid bone, (from  $\eta\theta\mu$ oc, 'a sieve,' and  $\epsilon\iota\delta$ oc, 'form.')

Shake out the tangled fragrance of the air. Conversant with all sweetness—Nature brings Hither the soul and quintessence of things: Airy solutions of the finer powers, Imponderable properties of flowers; Th' aroma of all seasons and all times. Kingdoms of nature, continents and climes-Too subtle and too spiritual, I ween, These for analysis however keen— Daintiest of senses, daintily it feeds On thymy pastures of the skyey meads, Drinks from etherial fountains, whence are quaffed Delicious lungfulls at one mighty draught, Cheering the breast, and sweetening all the blood, Like some celestial minister of good.

### BREATH OF LIFE, NATURAL AND SPIRITUAL.

God breathed—O breath with heavenly sweetness rife,—
Into man's nostrils first the breath of life.

The blissful aura vivified the whole,

And straightway man became a living soul.

Then odorous Eden yet more odorous grew
As o'er its bowers, th' informing Spirit blew
Another inner and diviner air,
Moving within the proper atmosphere,
That shook the leaves and made the tree-tops nod,
A mystic wind immediately from God,—
Rushing and mighty like the Holy Ghost
Poured out upon the day of Pentecost.
Still the same Spirit where it lists it blows,
We know not whence it comes nor where it goes,
But souls it quickened on Creation's morn,
Now dead in sin to a new life are born:
One inspiration of immortal breath
Creates a life beneath the ribs of death.

#### THEOPNEUSTY.

O via sacra, O thrice blessed door,

Once hallowed with Thy presence, hallow, Lord, once

more:

Inbreathe Thyself, my Maker! fill each cell
Of my deep breast, and deign with me to dwell.

Come, my Desire! Thou theme of heavenly tongues, Fulfill the want and hunger of the lungs.

Be thou my breath, my laughter, my delight,

My song by day, my murmured dream by night.

When hope dilates, and love my bosom warms,

Be these the product of thy powerful charms.

If grief convulses, be it grief for sin,

Prompt every sigh and make me pure within.

Perfumed by Thee "make every breath a spice

And each religious act a sacrifice."

TASTE-ELIMINATION AND WASTE-NOTHING LOST.

We eat to live: the Gustatory Sense

(The same as Smell, but with a difference,)

At the pleased portal of the hungry throat,

From endless sources neighboring and remote,

Assembles relishes, and daily feeds

On these to satisfy the body's needs.

Each moment, lo, we die and are reborn;\*

<sup>\* &</sup>quot;Occasio enim præceps est propter artis materiam, dico autem corpus, quod continue fluit et momento temporis transmutatur."—Galen.

The old becomes cadaverous and outworn; Beyond the boundary of our every breath, Wide yawns the open sepulchre of death: Parts of our living selves give up the ghost: Corrupt, corrupting, use and function lost, Benignant Nature with victorious force Effects deliverance from the loathed corse And body of this death: in ceaseless flow, Fun'ral processions of dead atoms go, Thronging life's ways and outward opening gates. All unattended, where no mourner waits. Because the quick have duties, let the dead Bury their dead, the Lord of life hath said. No fear that needful ministry or rite Shall then be wanting when they pass from sight; Sown on the winds or swallowed of the waves They shall not fail of hospitable graves. Dear to terrestial and celestial powers. Through every moment of the flying hours; Earth, careful mother, to her bosom draws

Each reverent partiele subject to her laws;

Dust welcomes dust, and all the happy ground

Rejoices that the lost again is found.

Again it forms a portion of the mould

To tread the circle it fulfilled of old.

Again it ministers to the thirsty root,

Mounts to the blossom and matures the fruit;

Eaten again, again it makes a part,

Or of the thinking brain or feeling heart.

### HUMAN WANT AND DIVINE SUPPLY.

Because we ne'er continue in one stay—
Our flowing lives still wash their banks away;
This colliquation of unstable flesh,
Invades the old and scarcely spares the fresh;
The new formed solid, even, oozes through,
"Thaws and resolves itself into a dew;"
And all is flux, and out ten thousand doors
Our manly strength perpetually pours—
We Hunger and We Thirst, and all abroad
We see spread out the mighty Feast of God.

Abounding plenty equal to the waste With Iuscious adaptations to the taste; Viands heaped up in such seductive guise, Forestalling pleasure looks with sparkling eyes: The golden produce of the garnered fields. Whate'er the valley or the mountain yields, The juicy tops of Nature, not that found In the dark mineral lumpish underground. By intermediate vegetative toil, And much elaboration of the soil, Lifted in air and glowing in the sun, We pluck the fruit then when the work is done. In curious quest of every dainty known, We draw from every month and every zone. To pile our boards, the canvas is unfurled Of more than half the navies of the world. Art intervenes, and as the case requires, Concocts the crude with culinary fires: Goes forth in nature to extend her range. And serve man's love of novelty and change,

By findings of manipulative skill,

Testings and tastings, mixing at her will

Of all the kingdoms, flavorings of the same,

And seasonings of vegetable flame.

Imperious Wants! obedient to whose call,

Armies capitulate, dynasties fall:

Howe'er the rulers of the earth combine,

They may not blink the fact that man must dine.

It might seem little and beneath God's care—
A punctual ordering of man's common fare;
Unwarranted, extravagant, absurd,
To think our Pater Nosters could be heard—
Did we not know that round our every meal
Suns wait and serve and mighty planets wheel.

LORD'S PRAYER-HODIERNAL BREAD-HYGIENIC WISDOM.

Father in heaven, hallowed be Thy name—
'Tis on Thy fatherhood we build our claim—
Stoop to our needs, we cannot else be fed,
Give us this day, as erst, our daily bread.

Preserve us from perversion and abuse,

Turning Thy bounties from their proper use; From gluttony and criminal excess, Making enough our rule, nor more nor less. Instruct us how to choose, lest that we sin Against the body's health, the powers within, Awful economies and sacred laws, Of half our miseries the dreadful cause. May we live innocent as at the first, Using safe beverages to quench our thirst, Our common drink be water from the well, Not brewed enchantments of the fires of hell, Not tasting unblest cups, by Thee unblest, But where Satanic benedictions rest, Cursing and killing, maddening the brain— Brief joy succeeded by eternal pain.

# INGESTION-DIGESTION-ASSIMILATION.

Be in our Mouths to sanctify our Food;

Begin the process changing it to Blood.

We dare not call that common and unclean

Which Thou hast cleansed—nor count that longer mean

So honored by assimilations grand, And exaltations of Thine own right hand, As through the channels of the body rolled, Th' ingested Morsel comes to be ensouled. Wherefore be present, every step attend Of its miraculous progress to the end. During the perilous passage of the strait, O keep fast shut the Laryngeal Gate: Adown the Throat while that it gently glides. And in the Stomach's secret chamber hides. Be there to entertain th' expected guest, And to the welcome give a keener zest. Make the couch ready: and mid veiling gloom, And holy privacy as in a womb, Induct into the mysteries of the place: Rain down celestial influence and grace Upon the nascent neophyte; prepare The lavers of regeneration; where By wondrous saturations\* for a time,

<sup>\*</sup> The Gastric Juice, like the saliva, is not secreted in considerable quan- 10

And fresh baptisms of the new-born Chyme, A part all purified, from soil purged clear, Made meet and worthy of a higher sphere, Enters the veins and mingles with the blood: The rest a stained probationary flood, Passing the Gate Pyloric waits awhile, Its transformation into purer Chyle. Prosper and bless and let the work proceed, Each faithful function equal to the need: Teach the strict Lacteals, duly this to guide Into the narrow way from out the wide, Where freed from feculence all white and clean. And trained, through mazes of the Glands between, For saintly fellowship and spousals sweet With the dear Lymph, as they together meet Within the Duct Thoracic, mount to gain

tity (Dr Beaumont says not at all) except under the stimulus of recently ingested food. It is estimated that the average total quantity secreted in a man of medium size in 24 hours is 14 pounds, equal to nearly two gallons. This quantity would be altogether incredible, were it not, that as soon as it has dissolved its quota of food, it is immediately re-absorbed and again enters into the circulation, together with the alimentary substances which it holds in solution.—Dailon.



The level of the pierced Subclavian Vein— Tempering the mass, to form a fluid part Of that humanity which fills the Heart.

HEART-CIRCULATION-NUTRITION-BLOOD EXHILIRATIONS.

Make room, my Heart!\* that pour'st thyself abroad,
Deep, central, awful mystery of God!

Lord of my bosom! wonder of the breast!

"Welcome the coming, speed the parting guest:"

The young white blood, commingled with the old—

Purple, impure, effete in part, and cold—

Give needful furtherance through the Lungs, to where

It meets the fiery spirits of the air—

<sup>\*</sup> In the Fish, the Heart is a single organ, having one Auricle and one Ventricle. In Reptiles, it has two Auricles placed side by side, and one Ventricle. In Quadrupeds and Man, it is double, with two Auricles and two Ventricles; and there are two distinct Circulations-the General or Systemic, and Pulmonary. The Blood on the Right Side of the Heart, whether found in the Veins or Arteries, is dark or venous; on the Left, it is ruddy and bright or arterial. The first belongs to the nocturnal side or hemissphere; the latter to the diurnal-the sun having its rising in the capillaries of the lungs, and its setting in those of the general system -where the blood loses for the time its anroral bloom and splendor. and becomes dark, half devitalized and charged with deadly poison, until having completed its circuit, its pristine glitter and heauty are once more restored, as it resppears on the horizon of the lungs. The rapidity with which the Blood moves is very great. Even in Arteries of the minutest size it is so rapid that the globules cannot be distinguished in it on micro-

In friendly barter with the growing plants

Exchanging what they need for what it wants;

For dingy carbon, refuse of the frame,

Receiving back the principle of flame;

While mystic cerebrations downward pour,

The human flood to humanize yet more,

Making it moral, with all passions rife,

Instinct with mortal and immortal life.

Transfigured thus, thus raised and glorified,

Complete the circle on the other side,

Where Auricle and Ventricle with power

Repeat their grasp five thousand times an hour;

Closing unresting hands that never tire

scopic examination. It is slower in the Veins than the Arteries, in the proportion of two to three, and still slower in the Capillaries. Volkman estimates the velocity in the arteries at 12 inches per second; in veins at 8 inches. Experiments have heen made to ascertain the time it takes the blood to pass the entire round of the circulation. Traces of a solution of Ferrocyanide of Potassium introduced into the right jugular vein of a horse appeared at the left in twenty to twenty-five seconds, but this is not decisive of the rate of the circulation, only of the diffusion. Results swarm with every heart-beat. Life's innumerable wheels, revolving all at once in every organ, make that heat representative of a life-time—a century of existence being no more than a calculable number of repetitions of that vital second.

On the one passionate object of desire; And through each moment of the night and day A traveling joy to every part convey; Filling each Cell of all the Organs up-As wine is poured into a jeweled cup— With the Falernian of the grapes of Heaven, The Living Blood miraculously given; Endued with plenteous power by which it can Rebuild the complex of the perfect man; To every organ like to like impart, Distribute brain to brain and heart to heart; Conquer the years, the wastes of time repair, Add to the body, make the fair more fair: Nor potent less to raise to loftiest heights Of sensuous pleasures, and divine delights-Untied to fleshly ministrations—fraught With stimulant to Feeling and to Thought, Our Ganymede, enlivening with full bowl "The feast of reason and the flow of soul."

HEART-SEAT OF THE AFFECTIONS-VISCERAL MODIFICATIONS

Undoubted Sovereign, worthiest to reign! Sharer of empire with the regal Brain! (Like omnipresent in the realms of sense Found at the centre and circumference, As if by multiplification, every part Possessed a sensory and beating heart) By virtue of thy birthright from above Thine all the high prerogatives of LOVE. One with thyself, Love's ample power display, Assert its right to universal sway! As thou, so Love is many and yet one, Its royal robes of soul and body spun--Assorted vestments, filling many a room, The beauteous product of the living loom, By the deft fingers of the feelings wrought Plying the shuttle with the helping thought-The several organs, to their nature true, Giving each tunic its distinctive hue-One of the colors of refracted light,

Or the chaste total of religious white—
Defining Loves, all Family Loves that bind
The Love of Country, Love of Human Kind,
The Love of God, all other Loves above,
The Love of Truth and Right, the Love of Love.

Within, what gracious sympathies appeal! What visceral yearnings do not mothers feel! The conscious vitals, full of fond alarms

For the sweet infant folded in her arms,

And melting tendernesses, that impart

Tears to the eyes but laughter to the heart.

# WOMAN-SEX-UNITY IN DIFFERENCE.

O loving Woman, man's fulfillment sweet,
Completing him not otherwise complete!
How void and useless the sad remnant left
Were he of her, his nobler part bereft!
Of her who bears the sacred name of Wife,
The joy and crown and glory of his life,
The Mother of his Children, whereby he
Shall live in far off epochs yet to be.

Conjoined but not confounded, side by side Lying so closely nothing can divide; A dual self, a plural unit, twain, Except in sex, to be no more again; Except in Sex, for sex can naught efface, Fixed as the granite mountain on its base, But not for this less one, away to take This sweet distinction were to mar not make. Dearer for difference in this respect, As means of rounding mutual defect. Woman and Man all social needs include; Earth filled with men were still a solitude: In vain the birds would sing, in vain rejoice, Without the music of her sweeter voice. In vain the stars would shine, 'twere dark the while Without the light of her superior smile. To blot from earth's vocabularies one Of all her names were to blot out the sun.

LOVE OF THE SEXES-ENDS ANSWERED.

O wondrous Hour, supremest hour of fate,

When first the Soul discerns its proper Mate— By inward voices known as its elect— Distanced by love, and infinite respect, Fairer than fairest, shining from afar, Throned in the heights, a bright particular star The glory of the firmament, the evening sky Glad with the lustre of her beaming eye. Young Love, First Love, Love, haply at first sight, Smites like the lightning, dazzles like the light: Chance meeting eyes shoot forth contagious flame Sending the hot blood wildly through the frame. By strange enchantment violently strook, The total being rushes with a look: A beauty never seen before, except some gleams Purpling the atmosphere of blissful dreams, Wakens rare raptures and sensations new Both soul and body thrilling through and through. Says sage Experience—sighing o'er the past—

11

These dear illusions will not always last?

For beauty fades and disappointment clings To the reality of human things? It may be so—it may be, lovers' sight Surveying all things by love's purple light, Sees not the faults possession shall disclose, Nor the sharp thorn concealed beneath the rose. But if thus Nature her great ends attain The pomps of fancy dazzle not in vain: The pleasing falsehood of perfection flits, But not the Love, that in contentment sits Among the Dear Ones of its happy home, Blest with sweet foretastes of the heaven to come. Deciduous charms of face unmissed depart, While bloom the fadeless beauties of the heart: Inward conformity, and gradual growth Of moral likeness, tightening bonds of both, Perfect the marriage, which was but begun Upon that day they were pronounced one.

#### TRUE LOVE-SPURIOUS LOVE.

True Love is humble, thereby is it known

Girded for service, seeking not its own;

Exalts its object, timid homage pays,

Vaunts not itself, but speaks in self-dispraise:

"Look not on me," it says, for "'I am black,'

In thee all fulness is, in me all lack:

But what I have and am are wholly thine

Vast were the grace wouldst thou give thine for mine."

Let Love but enter, it converts the churl,

And makes the miser lavish as an earl;

The strict walls of his prison, giving way,

Fall outward and let in the light of day:

Released from base captivity to pelf,

He upward soars into a nobler self;

And hands, that once did nought but clutch and hoard,

Now emulate the bounty of the Lord;

Hold up a mirror that reflects the face

Of Him whose heart is love and man-ward grace.

O how unlike to this, so chaste, refined,

Magnanimous, benevolent and kind,

Is that base thing defiling and defiled,

Born of unbridled lusts and passions wild,
Which soon of all the virtues rings the knell
And sends its subjects headlong down to hell.
The hidden canker of a vicious heart
Spreads mortal sickness to the farthest part:
Th' infected body rots from day to day
Till death contemptuous calls the soul away,
To its own place its sentence to fulfill:
"Let him that filthy is be filthy still."

CHARITY-PHYSICIAN-OPIFERQUE PER ORREM DIOOR.\*

O Ye devoted to the Healing Art

By solemn consecration, set apart

To be the ministers of God above

In the sublime Activities of Love;

Whose special function 'tis to give relief

In the dark hours of suffering and of grief;

Between the living and the dead, to stand

Where fall the shafts of death on either hand;

Without one thought of flight, to still maintain

<sup>\*</sup> Motto of the Society.

Perpetual battle with the Powers of Pain;
With a fine arrow from a well bent bow
Transfixing fatally the murd'rous foe;
And with an arm made powerful to save,
Snatching the destined victims of the grave;—
The lofty nature of your office such,
You cannot magnify the same too much,
Which Tully even, eloquently lauds,
As that which lifts man nearest to the gods.

NOSOLOGY-AUSCULTATION OF HEART AND LUNGS.

How many forms of sickness man befall,
Sorrow and pain the common lot of all!
Science enquires, and as its kinship finds
Makes classes, orders, families and kinds,
Grouping and marshalling diseases so
You can them better nominate and know.
But no nosology did e'er include
The total of the mighty multitude.

Wise to interpret each prophetic sign,

To pierce the veil and hidden fates divine,

When parents ask, with grief and terror wild,
Canst thou not save my darling, save my child?
You skilled to catch, while listening to the breath,
The distant footsteps of approaching death
May in the sighing of the suffering lung
And in its stillness hear alike a tongue
That syllables oracular reply:

"Impossible, 'tis fixed, your child must die."

Response more dread not Delphic prophetess

E'er shuddered from her murmurous recess.

With rush of countless chariots, palpitates
Life's great metropolis through all her gates,
Their crimson wheels with a perpetual sound,
Coming and going in their endless round,
Are heard tumultuous as thy hurrying throng
Th' Appian or Flaminian ways along:
Tis yours to know next hour all this will fail,
And death and silence everywhere prevail.

FHYSICIAN'S CHARACTEE AND AIMS—SCIENCE FROGERSSIVE.

O it is well that ye have hearts to feel

And ears not deaf to pity's soft appeal, Putting no difference 'twixt rich and poor, Plying with equal zeal the means of cure, Not deeming it becoming to regard Color or rank or person or reward. The man of impure life and sordid aims He smuts his office and his calling shames: Him you disown and place him under ban As nothing better than a charlatan. Believing needless ignorance a crime, You strive to reach the summit of your time; To old age learning up from early youth Your life one long apprenticeship to truth: Wisely suspicions sometimes of the new, Ye give alert acceptance to the true: Even though it make old science obsolete. It with a thousand welcomes still you greet. "Knowledge is power," and here 'tis power to save, A power like God's to rescue from the grave. Each Year adds something-many things ye know

Your sires knew not a Hundred Years ago;
Art grown to more, your sons will higher climb,
And make the Coming Centuries sublime:
Till Christ's Millennial Kingdom shall begin,
And put an end to sickness and to sin.
Heights of the Future! breezy with the breath
Of vernal quickening to the fields of Death,
In the far distance of the long before,
We think we see your misty summits soar:
Though scarce distinguished from the mingling skies,
How glad the sight to our believing eyes!

SPIRITUAL MALADIES-CHRIST THE GREAT PHYSICIAN.

Ah! there are maladies beyond your skill:
You cannot cure depravity of will:
You cannot mend a moral nature flawed,
Convert a mind at enmity with God:
You cannot terminate the inward strife,
Restore the broken harmony of life:
With all th' armamentarium of Art
Restrain the outflow of an evil heart:

Cleanse by detergent washings of the skin
Th' immedicable leprosy of sin:
Remove the lunacy that chooses death,
And imprecates destruction with each breath.
When came the Great Physician of the Skies,
To find a remedy that should suffice,
Knowing 'twas not in mineral or wood,
He sought it in a Pharmacy of Blood;
And since none other but His own was pure,
He transfused that to consummate the cure.
Man curing when past cure—content to give
Himself to die to make His patient live.

DEATH-IMMORTALITY-RESURRECTION-SPIRITUAL RODY.

Death spreads, no more—a black and wrathful cloud
The smiling infinite of heaven to shroud—
A harmless mist, instead, divinely bright
With dewy splendors of the morning light,
That scarcely serves th' eternal world to hide,
Where loved ones gone before in bliss abide:
Lo! what a mighty beckening of hands,

And wafted welcomes of angelic bands, As one of Christ's dear number upward springs, And first essays his wondrous gift of wings. Such greetings did your recent coming wait, O aged pilgrim !\* at the heavenly gate, When man's allotted years on earth now spent, You, dying, "to the greater number went."; What though your body moulders 'neath the sod, Its untouched life is hid with Christ in God. I heard a voice proclaiming from the skies: "The dead shall live, with my dead body rise." Awake and sing, O ve that dwell in dust, Because He lives, who is your life, ye must. His quickening spirit shall go forth again, His power o'ershadow and His love impregn. The slumbering germs dispersed through land and sea, The buried ovules of identity,

<sup>\*</sup> Dr. L. A. Smith.

<sup>†</sup> Ahiit ad plures. If this phrase was an apt and expressive equivalent for death 2,000 years ago, how much more now.

Shall suddenly unfold, and all the Earth
Be as a woman in the pangs of birth.
The Body born not mortal like that sown,
But kindred and resemblant to Christ's own:
Admiring angels shall the sight applaud,
Blazing with all the majesty of God.

